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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/218,763 12/22/98 ALEXEFF

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HARNES DICKY & PIERCE
P O BOX 828
BLOOMFIELD HILLS MI 48303

EXAMINER

GRAY, D

ART UNIT

PAPER NUMBER

2851

DATE MAILED:

01/07/00

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/218,763

Applicant(s)

ALEXEFF, IGOR

Examiner

David M Gray

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2851

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- 1) ☒ Responsive to communication(s) filed on 01 November 1999.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-9,11,13-19 and 21-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-9,11,13-19 and 21-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☒ The proposed drawing correction filed on 01 November 1999 is: a) ☒ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some * c) ☐ None of the CERTIFIED copies of the priority documents have been:
1. ☐ received.
2. ☐ received in Application No. (Series Code / Serial Number) _____.
3. ☐ received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

- 14) ☐ Notice of References Cited (PTO-892)
- 15) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 16) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 17) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 18) ☐ Notice of Informal Patent Application (PTO-152)
- 19) ☐ Other: _____

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Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1, 2, 4-9, 11, 13-19 and 21-24 stand rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

4. Contrary to applicant's remarks, it is patently clear that every embodiment of the outstanding disclosure (with the possible exception of the embodiment of Fig. 10 to be discussed below) is incapable of capturing an image field of "at least 180 degrees". The aperture plate, member 32, clearly must have some thickness. Thus light coming from an angle of 90 degrees, relative to an axis perpendicular to the surface of the optical block, could not even reach the surface of the optical block. Further, it is unclear how the light which does strike the surface of the optical block would be correctly imaged on the surface of the image detection means 52. Applicant fails to define the optical characteristics which provide for the ability to correctly image a wide field of view using a pinhole aperture and an optical block for bending the light by refraction. Applicant, at best, provides a nebulous set of requirements for making the image-sensing device. It is noted that applicant, in defining the optical block, states "a material which

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has a high index of refraction (preferably more than about 1, and still more preferably from about 1.5 to about 4).” According to the available literature in the Office, all optical materials have an index of refraction greater than 1, with air being approximately 1, and the highest index of refraction is diamond which has an index of refraction of only 2.419. It is also noted that applicant, in defining the pinhole, states “the pinhole has a diameter from about 100 microns to about 1 centimeter.” It is clear that an aperture having a diameter as large as 1 centimeter would not function as a pinhole. Applicant alleges that the outstanding invention “has the ability to recover color content” but fails to disclose how the image processing apparatus compensates for variations in refraction due to variation in wavelength. Further, the embodiment having color filters (or the cleaning means) between the pinhole and the optical block would further restrict the angle of the image field to far less than 180 degrees.

5. Regarding the embodiment of figure 10, the so-called “lens” 60 is defined as “a flat plate of about 10 times the aperture 44 diameter and a thickness about equal to the aperture 44 diameter.” Light striking the edge of this plate will not enter the aperture 44. It is unclear what light striking the surface of the plate will do. It appears that such a plate would refract light such that only a portion of the image field would reach the aperture. And that most of that light would undergo internal reflection inside the stem of “lens” 60 such that any image data would be lost. Clearly this so-called lens would not provide a greater field of view approaching 220 degrees.

6. Regarding the embodiment of figure 12, it is unclear what optical dimension and surfaces of the optical block 106 would provide the features desired by applicant. And applicant provides no basis for determining the required dimensions and surface configurations.

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7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 11 and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9. Regarding claim 11, the claim limitation “a device selected from the group consisting of the optical block, the image intensifying means, and combinations thereof” renders the claim indefinite. The “optical block” is defined in base claim 1 and cannot be optionally selected in a dependent claim. Nor is it clear what applicant regards as “combinations thereof.”

10. Regarding claim 19, the optical block is defined in base claim 1 as “comprised of a refractive material” and therefor claim 19 fails to further limit the subject matter of claim 1.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

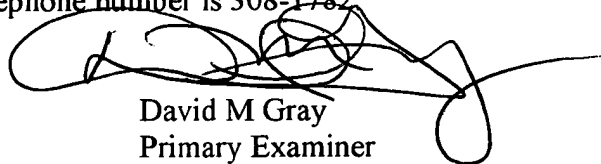
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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David M Gray whose telephone number is 703-308-1698. The examiner can normally be reached on M-F 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 308-1436. The fax phone numbers for the organization where this application or proceeding is assigned are 308-7722 for regular communications and 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-1782

A handwritten signature in black ink, appearing to read 'David M Gray', is written over the printed name and title.

David M Gray
Primary Examiner
Art Unit 2851

dmg
January 4, 2000